# light report

## November 2003

## Volume 7; Number 11

## Superintendent's Summary

The November 13 State Supreme Court Ruling on billing of streetlight costs will have significant financial impacts on the City of Seattle and City Light. Adequate streetlighting is a basic municipal service which is proven to enhance neighborhood safety and quality of life. City Light is committed to working with the Mayor's Office, the City Attorney and the Finance Department on how to quickly and completely comply with this ruling with no interruption to streetlight service.

Jim Ritch, Acting Superintendent

## City Light helped reduce flooding during record rains at Skagit



Highway 20 at Pyramid Creek, just east of Diablo, washed out by flooding, October 20, 2003.

When the rain started falling at City Light's Skagit Project on Oct. 16, the elevation of Ross Lake stood at 1,586 feet above sea level. By the time rains tapered off five days later, Ross was brimming at 1,601.4 feet, about one foot below what we consider full.

Here's the story of how City Light operated its Skagit River dams, in cooperation with the U.S. Army Corps of Engineers, to help reduce downstream flooding during those five days.

### Thursday, Oct. 16

As rain and inflows into Ross Lake increase, City Light voluntarily shuts down Ross Powerhouse and begins holding water in the reservoir at about 5 p.m. It continues to rain heavily. In 24 hours Thursday and Friday, more than seven inches of rain fall at Diablo.

## Friday, Oct. 17

Ross remains shut down. Water is flowing into the lake at the rate of about 26,000 cubic feet per second. Normal inflow at this time of year is 1,200 cfs. While Ross is not operating, City Light must buy replacement power from the market to meet load and contract obligations.

## Saturday, Oct. 18

The Corps of Engineers requests that City Light not release more than 5,000 cfs from Ross Lake, but City Light keeps (continued on page 4)

## First Flooding, Now Rockslides



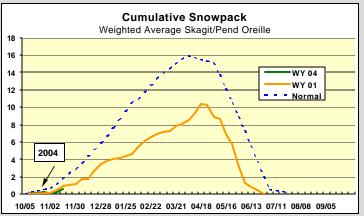
Still reeling from the effects of the Oct. 20 flooding, the Skagit Project was hit again, this time by a massive rockslide.

Shortly after 6 am on Sunday, November 9 an

estimated 3 million cubic yards of rock came loose from the walls of Gorge Canyon about one mile east of Newhalem. Diablo, already cut off from the east by a major washout, is now cut off from the west by tons of rock. One lane has been cleared, but with the threat of more rocks falling at any moment travel is extremely hazardous and restricted to absolute emergencies only. Supplies are being brought into Diablo by helicopter, schoolchildren are staying with friends and relatives downriver, and residents are stocking in food and supplies for what may be a very

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## - Water Resources as of November 9, 2003 - Snowpack and Precipitation



10/26

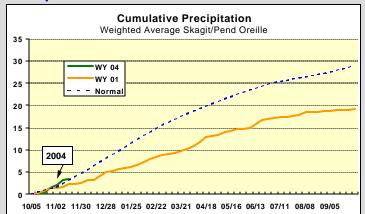
09/28

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01/18

02/15



The weighted average of Cumulative Precipitation for the Pend Oreille/Skagit basins for the period October 1st, 2003 through November 10, 2003 was 108% of normal. Weighted Average River Basin Cumulative Snowpack as of November 10th had reached 33% of normal. The water year is now just six weeks old. There is still a lot of time ahead for these numbers to change, but the outlook from the climate services is for a wetter than normal winter.

## Ross Reservoir Levels 1600 1590 1580 1570 1560 2004 WY 04 Normal Empty Flood Control Current Forecast 1480 1480

Last month's goal was to keep Ross Lake above 1565 through October for Bullhead Trout spawning. Record breaking high streamflows resulted in a mid-month change in the goal to drafting Ross down to levels that will support flood control operations and optimum flows during the Chum Salmon spawning period Nov 15th through Jan 6th.

03/14

04/11

05/09

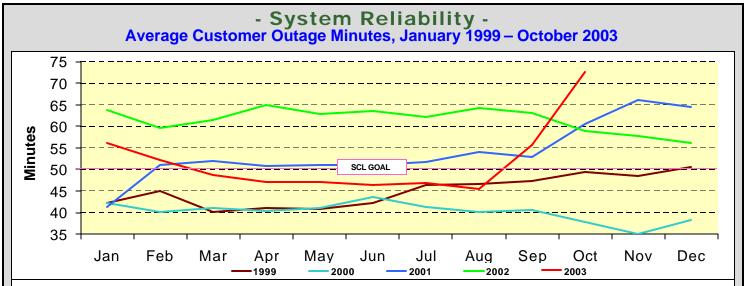
06/06

07/04

08/01

08/29

09/26



The System Average Interruption Duration Index (SAIDI) jumped by 17 minutes to 72.7 for October. Over 70% of this increase was related to a series of high wind events throughout the month. Also, about 25% of the increase was related to substation and distribution equipment problems.

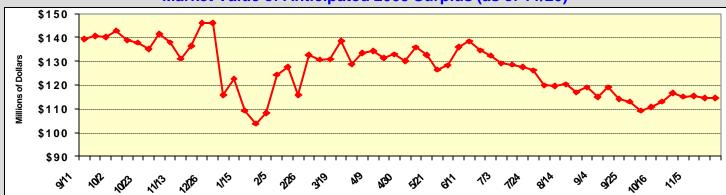
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## - Markets and Power Management - Forward Power Prices, Current vs. Operating Plan

	High Load Hours			Low Load Hours		
	Operating Plan	Current	Change	Operating Plan	Current	Change
Nov 03	\$40	\$41	+\$1	\$30	\$33	+\$3
Dec 03	\$44	\$46	+\$2	\$35	\$37	+\$2
Jan 04	\$47	\$47	\$0	\$39	\$38	-\$1
Feb 04	\$45	\$42	-\$3	\$38	\$36	-\$2
Mar 04	\$39	\$38	-\$1	\$34	\$32	-\$2
Apr 04	\$35	\$34	-\$1	\$31	\$29	+\$2
May 04	\$27	\$27	\$0	\$21	\$21	\$0
Jun 04	\$26	\$26	\$0	\$20	\$20	\$0
Jul 04	\$40	\$38	-\$2	\$32	\$31	-\$1
Aug 04	\$48	\$46	-\$2	\$38	\$37	-\$1
Sep 04	\$46	\$44	-\$2	\$37	\$36	-\$1
Oct 04	\$45	\$44	-\$1	\$36	\$35	-\$1

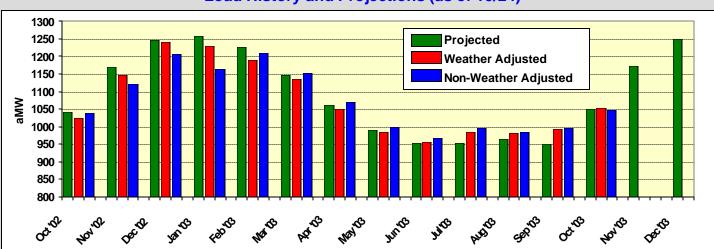
This table compares the forward prices for energy as of October 27, 2003 with those assumed in the operating plan. For the remaining months of this year, the forward prices are those assumed in the October 2002 operating plan. For 2004, the forward prices are those assumed in the October 2003 operating plan.

## Market Value of Anticipated 2003 Surplus (as of 11/20)



The projected value of the 2003 net wholesale revenues has eroded over the last few weeks because of steadily worsening long-range forecasts flows in the fourth quarter. Retail demand is also up, reducing the amount of energy available to market. While the former is bad news for our overall revenue, the latter is good news.

## Load History and Projections (as of 10/24)



We have observed slight increases in monthly load since July, leading us to adjust upward the projected load for the remaining months of 2003.

releases at 0 cfs. Ross is shut down all day. The water level in the lake rises about 1.5 feet that day and is up five feet since Thursday.

## Sunday, Oct. 19

After the Skagit River crests downstream, City Light generates for about three hours, at no more than 2,800 cfs, to help slow the rate at which Ross Lake is filling, by the end of the day, the lake level is just under 1,593 feet.

## Monday, Oct. 20

A day of heavy rain. Ross is shut down until 10 a.m. when the Corps, concerned about the lake level, asks City Light to release 5,000 cfs. This release continues until 5 p.m., when the Corps asks City Light to shut Ross down again because of downstream flooding. Inflow is 39,000 cfs, and the lake elevation is 1,594.7 feet. At 11 p.m., the Corps again asks City Light begins to begin releasing 5,000 cfs to make more room in the reservoir, now at 1,596.7 feet.

## Tuesday, Oct. 21

Release of 5,000 cfs continues until 2 p.m., at which time Ross Lake is at 1,600.72 feet.

Ross Lake is now considered to be in the "flood control pocket," and by agreement the Corps can now issue orders regarding dam operation. Since another rainstorm is predicted, the Corps at 11 p.m. orders City Light to begin releasing water at 25,000 cfs to make room for more rain. The lake level has risen to 1,601.4, one foot below full, and inflow is at 22,000 cfs.

Thankfully, the rainstorm fails to materialize. Over the next two days, City Light gradually reduces discharges as inflows into Ross Lake decline.

At the peak of the flooding, Ross Lake inflows reached a maximum of 48,000 cfs. City Light released at the rate of about 5,000 cfs during that period, reducing the downstream river level by an estimated 8 to 9 feet.

As Acting Superintendent Jim Ritch puts it, "City Light did everything within its control to mitigate downstream flooding to the maximum extent possible."

## Bits and Pieces: News and Notes from City Light and the Utility Industry

• Skagit Tour: Seattle City Light hosted a tour of the Skagit Project for a group of key customers during October. Customers included the Fred Hutchinson Cancer Research Center, Nucor Steel, Highline Hospital, City of Bothell, the Mariners and the Seattle Building Owners and Managers Association. This event provided a valuable opportunity to educate these customers on the complexities of providing power to the citizens of Seattle and our commitment to the

environment.

- Energy Legislation: Progress on federal energy legislation remains elusive, stalled by disagreements between Republican Senator Charles Grassley and Republican House Member Bill Thomas on an ethanol tax policy.
- Media: In addition to calls regarding the flooding, we received numerous calls about the windstorm. Our problems were much less severe than those in Puget Sound Energy and SnoPUD service territories. We had about 5,700 customers without power at the peak of the storm.
- The failure of Congress over nearly three years to enact energy legislation has fostered uncertainty and hindered private investments in transmission lines, power plants and energy development, Energy Secretary Spencer Abraham says. Abraham said it's essential that Congress resolve the energy debate and do it this year. He said energy companies and investors are reluctant to make energy investment decisions when they don't know how congressional actions might affect those investments.
- A wet spring and surplus electricity sales move the Bonneville Power Agency from a dismal outlook to a healthy financial picture. Most of the cost savings came from a program in which BPA is refinancing privately held debt for the nuclear plant, the Columbia Generating Station, and other nuclear projects that were abandoned in the 1980s. Under the program, current debt is retired with lower-interest notes that will be repaid in the future. As a result of all these positive developments, BPA was able to reduce its rate increase to 2 percent.
- On Tuesday, Ed Hansen, Snohomish County PUD's general manager proposed that the PUD reject a deal that would see it pay 9.7 percent less for the electricity it buys from the Bonneville Power Administration if it and 71 other public utilities agree to drop a lawsuit against BPA, the Northwest's federal energy wholesaler. Instead, the PUD should push ahead with litigation that challenges how BPA distributes the electricity it gets from hydroelectric dams on the Columbia River and from a nuclear power plant, Hansen said. The lawsuit claims that the formula BPA is using to distribute the electricity it generates for the 2002-06 rate period is too favorable to private utilities such as Puget Sound Energy, and that it sets a bad precedent for future rate periods.
- According to "Emissions of Greenhouse Gases in the United States 2002", a report released by the Energy Information Administration (EIA), from 1990 to 2002, U.S. greenhouse gas intensity declined by 21.4 percent an average of 2.0 percent per year. The full report can be found on EIA's web site at: http://www.eia.doe.gov/oiaf/1605/ggrpt/index.html

## **UPCOMING COUNCIL AGENDA ITEMS**

Meetings of the Energy and Environmental Policy Committee have been cancelled through the month of December to accommodate the Biennial Budget Process schedule. Meetings will resume in January 2004.